

WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a polypeptide, the sequence of which is at least 90% identical to a reference amino acid sequence selected from the group consisting of:

(a) amino acids 1 to 212 of SEQ ID NO:2; and

(b) a fragment of amino acids 1 to 212 of SEQ ID NO:2, wherein said fragment has hypoxanthine (guanine) phosphoribosyl transferase (HPRT) activity.

2. The isolated nucleic acid molecule of claim 1, wherein said reference amino acid sequence is (a).

3. The isolated nucleic acid molecule of claim 1, wherein said reference amino acid sequence is (b).

4. The isolated nucleic acid molecule of claim 1, wherein the polypeptide sequence is at least 95% identical to the reference amino acid sequence.

5. The isolated nucleic acid molecule of claim 4, wherein said reference amino acid sequence is (a).

6. The isolated nucleic acid molecule of claim 4, wherein said reference amino acid sequence is (b).

7. The isolated nucleic acid molecule of claim 1, which encodes a polypeptide comprising amino acids 1 to 212 of SEQ ID NO:2.

8. The isolated nucleic acid molecule of claim 1, which encodes a polypeptide comprising a fragment of amino acids 1 to 212 of SEQ ID NO:2, wherein said fragment has HPRT activity.

9. The isolated nucleic acid molecule of claim 1, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

10. The isolated nucleic acid molecule of claim 9, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

11. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 1 into a vector.

12. A recombinant vector comprising the isolated nucleic acid molecule of claim 1.

13. The recombinant vector of claim 12, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

14. A recombinant host cell comprising the isolated nucleic acid molecule of claim 1.

15. The recombinant host cell of claim 14, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

16. A method for producing a polypeptide, comprising:

- (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 1; and
- (b) recovering the polypeptide from the cell culture.

17. An isolated nucleic acid molecule comprising a polynucleotide sequence encoding at least 30 contiguous amino acid residues of amino acids 1 to 212 of SEQ ID NO:2.

18. The isolated nucleic acid molecule of claim 17, wherein said polynucleotide sequence encodes at least 50 contiguous amino acid residues of amino acids 1 to 212 of SEQ ID NO:2.

19. The isolated nucleic acid molecule of claim 17, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

20. The isolated nucleic acid molecule of claim 19, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

21. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 17 into a vector.

22. A recombinant vector comprising the isolated nucleic acid molecule of claim 17.

23. The recombinant vector of claim 22, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

24. A recombinant host cell comprising the isolated nucleic acid molecule of claim 17.

25. The recombinant host cell of claim 24, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

26. A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 17; and
(b) recovering the polypeptide from the cell culture.

27. An isolated nucleic acid molecule comprising at least 50 contiguous nucleotides of nucleotides 626 to 1260 of SEQ ID NO:1, or the complementary strand thereto.

28. The isolated nucleic acid molecule of claim 27, wherein said nucleic acid molecule comprises at least 50 contiguous nucleotides of nucleotides 626 to 1260 of SEQ ID NO:1.

29. The isolated nucleic acid molecule of claim 27, wherein said nucleic acid molecule comprises at least 50 contiguous nucleotides of the complementary strand of nucleotides 626 to 1260 of SEQ ID NO:1.

30. The isolated nucleic acid molecule of claim 27, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

31. The isolated nucleic acid molecule of claim 30, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

32. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 27 into a vector.

33. A recombinant vector comprising the isolated nucleic acid molecule of claim 27.

34. The recombinant vector of claim 33, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

35. A recombinant host cell comprising the isolated nucleic acid molecule of claim 27.

36. The recombinant host cell of claim 35, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

37. A method for producing a polypeptide, comprising:

- (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 28; and
- (b) recovering the polypeptide from the cell culture.

38. An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a polypeptide, the sequence of which is at least 90% identical to a reference amino acid sequence selected from the group consisting of:

- (a) the amino acid sequence of the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844; and
- (b) a fragment of the amino acid sequence of the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844, wherein said fragment has HPRT activity.

39. The isolated nucleic acid molecule of claim 38, wherein said reference amino acid sequence is (a).

40. The isolated nucleic acid molecule of claim 38, wherein said reference amino acid sequence is (b).

41. The isolated nucleic acid molecule of claim 38, wherein the polypeptide sequence is at least 95% identical to the reference amino acid sequence.

42. The isolated nucleic acid molecule of claim 41, wherein said reference amino acid sequence is (a).

43. The isolated nucleic acid molecule of claim 41, wherein said reference amino acid sequence is (b).

44. The isolated nucleic acid molecule of claim 38, which comprises a polynucleotide sequence encoding the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844.

45. The isolated nucleic acid molecule of claim 38, which comprises a polynucleotide sequence encoding a fragment of the amino acid sequence of the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844, wherein said fragment has HPRT activity.

46. The isolated nucleic acid molecule of claim 38, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

47. The isolated nucleic acid molecule of claim 46, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

48. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 38 into a vector.

49. A recombinant vector comprising the isolated nucleic acid molecule of claim 38.

50. The recombinant vector of claim 49, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

51. A recombinant host cell comprising the isolated nucleic acid molecule of claim 38.

52. The recombinant host cell of claim 51, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

53. A method for producing a polypeptide, comprising:

- (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 38; and
- (b) recovering the polypeptide from the cell culture.

54. An isolated nucleic acid molecule comprising a polynucleotide sequence encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844.

55. The isolated nucleic acid molecule of claim 54 which comprises a polynucleotide sequence encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA contained in ATCC Deposit No. 75844

56. The isolated nucleic acid molecule of claim 54, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

57. The isolated nucleic acid molecule of claim 56, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

58. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 54 into a vector.

59. A recombinant vector comprising the isolated nucleic acid molecule of claim 54.

60. The recombinant vector of claim 59, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

61. A recombinant host cell comprising the isolated nucleic acid molecule of claim 54.

62. The recombinant host cell of claim 61, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

63. A method for producing a polypeptide, comprising:

- (a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 54; and
- (b) recovering the polypeptide from the cell culture.

64. An isolated nucleic acid molecule comprising at least 50 contiguous nucleotides of the coding sequence of the human cDNA contained in ATCC Deposit No. 75844, or the complementary strand thereto.

65. The isolated nucleic acid molecule of claim 64, wherein said nucleic acid molecule comprises at least 50 contiguous nucleotides of the coding sequence of the human cDNA contained in ATCC Deposit No. 75844.

66. The isolated nucleic acid molecule of claim 64, wherein said nucleic acid molecule comprises at least 520 contiguous nucleotides of the complementary strand of the coding sequence of the human cDNA contained in ATCC Deposit No. 75844.

67. The isolated nucleic acid molecule of claim 64, wherein said polynucleotide sequence comprises a heterologous polynucleotide sequence.

68. The isolated nucleic acid molecule of claim 67, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

69. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 64 into a vector.

70. A recombinant vector comprising the isolated nucleic acid molecule of claim 64.

71. The recombinant vector of claim 70, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

72. A recombinant host cell comprising the isolated nucleic acid molecule of claim 64.

73. The recombinant host cell of claim 72, wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

74. A method for producing a polypeptide, comprising:
(a) culturing a host cell under conditions suitable to produce a polypeptide encoded by the nucleic acid molecule of claim 65; and
(b) recovering the polypeptide from the cell culture.

75. A method of using the polynucleotide of claim 27 to detect a nucleic acid molecule in a biological sample which hybridizes thereto comprising:
(a) obtaining a biological sample suspected of containing said nucleic acid molecule;
(b) contacting said biological sample with said polynucleotide under conditions suitable for hybridization of said polynucleotide to said nucleic acid molecule; and
(c) determining the presence or absence of said nucleic acid molecule in said biological sample.

76. A method of using the polynucleotide of claim 66 to detect a nucleic acid molecule in a biological sample which hybridizes thereto comprising:

(a) obtaining a biological sample suspected of containing said nucleic acid molecule;

(b) contacting said biological sample with said polynucleotide under conditions suitable for hybridization of said polynucleotide to said nucleic acid molecule; and

(c) determining the presence or absence of said nucleic acid molecule in said biological sample.

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